

Facility Name: **Interfor U.S. Inc. – Meldrim**  
City: Meldrim  
County: Effingham  
AIRS #: 04-13-103-00004

Application #: TV-522192  
Date Application Received: February 3<sup>rd</sup>, 2021  
Permit No: 2421-103-0004-V-07-0

Program	Review Engineers	Review Managers
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## Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Interfor U.S. Inc. – Meldrim** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. The narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

**I. Facility Description****A. Facility Identification**

1. Facility Name: Interfor U.S. Inc. – Meldrim
2. Parent/Holding Company Name: Interfor U.S. Inc.
3. Previous and/or Other Name(s):

Union Camp Corporation-Wood Products-Meldrim, and  
International Paper-Wood Products (Meldrim Mill)  
Simpson Lumber Company, LLC Meldrim Operations

4. Facility Location

911 Old River Road  
Meldrim, GA 31318

5. Attainment, Non-attainment Area Location, or Contributing Area

Interfor U.S. Inc – Meldrim (hereinafter, “facility”) is located in an attainment area.

**B. Site Determination**

There are no other facilities which could possibly be contiguous or adjacent and under common control.

**C. Existing Permits**

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/Effectiveness	Purpose of Issuance
2421-103-0004-V-06-0	August 16 <sup>th</sup> , 2016	Title V Permit Renewal
2421-103-0004-V-06-1	October 3 <sup>rd</sup> , 2018	Title V Permit Amendment for the addition of continuous direct-fired kiln (ID No. 8000)

**D. Process Description**

1. SIC Codes(s)

2421

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection

Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

This facility produces southern yellow pine dimensional lumber and timbers.

3. Overall Facility Process Description

Log Preparation:

Southern yellow pine logs of tree length are received by trucks. The logs are stored on ten concrete log pads. The logs are sawn to desired length, debarked, and scanned for metal.

Bark from the debarker is dropped into a chain conveyor and conveyed to a bark holding bin to be sold off site as fuel.

Poor quality log parts are chipped and used as a paper mill fiber source.

Sawmill:

Sawmills cut the logs into dimensional lumber or timbers. The sawmill equipment includes a twin band saw, a two-saw edger, an 11-saw trimmer, a 36" curve saw, and a two-saw vertical double arbor edger. Lumber is trimmed, sorted by length and dimension, and stacked on sticks.

Trim blocks and edger strips are chipped and transferred to the adjacent paper mill as a fiber source.

Lumber Drying Kilns:

The lumber and timbers are dried in one of four direct-fired kilns— three direct-fired kilns with a maximum heat input capacity of 18.53 MMBtu/hr, each, and one direct-fired continuous kiln with a maximum heat input capacity of 40 MMBtu/hr— using planer mill shavings as a fuel, to approximately 19 percent moisture content.

Planer Mill:

The dried lumber and timbers are planed in the planer mill, and then sorted by length, size, and grade, and transported by truck or rail for delivery to the customer.

General:

By-products produced by the facility are wood chips, bark, sawdust, and planer shavings. These by-products are used on site as fuel; the excess is sold to outside customers for various uses.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

## E. Regulatory Status

## 1. PSD/NSR

Interfor U.S. Inc. – Meldrim is located in Effingham County, an attainment area for all criteria pollutants. The facility is not one of the 28 named source categories under Prevention of Significant Deterioration (PSD) regulations. The facility was a minor source under PSD regulations before Title V Permit Amendment No. 2421-103-0004-V-06-1 was issued. After the addition of Kiln 8000, the volatile organic compounds (VOC) potential-to-emit (PTE) increased to over 250 tons per year (tpy) and the facility is now a major source under PSD regulations for VOC.

The facility has never undergone any PSD reviews. When the facility applied for the construction of Kiln 8000, they used the “one-time doubling” provision to avoid the PSD review. Existing Condition 3.2.1 contained an annual throughput limit for the existing kilns (ID Nos. 5000, 6000, and 7000), capping the facility before the modification as a minor source under PSD regulations, while Existing Condition 3.2.2 contained an annual throughput limit for the new kiln (ID No. 8000) and capped VOC emissions increases for the modification, which is, by itself, not major.

Note that non-attainment area new source review (NAA NSR) is not applicable because Effingham County is an attainment area for all criteria pollutants.

## 2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	✓			✓
PM <sub>10</sub>	✓			✓
PM <sub>2.5</sub>	✓			✓
SO <sub>2</sub>	✓			✓
VOC	✓	✓		
NO <sub>x</sub>	✓			✓
CO	✓			✓
TRS	✓			✓
H <sub>2</sub> S	✓			✓
Individual HAP	✓	✓		
Total HAPs	✓	✓		
Total GHGs	✓			✓

### 3. MACT Standards

The Plywood and Composite Wood Products (PCWP) MACT, found in 40 CFR Part 63 Subpart DDDD, indicates that the MACT is applicable to sawmills with lumber kilns (SIC #2421) which are major for HAPs. According to Table 2 above, the facility is a major source for single/combined HAP emissions. Therefore, the MACT is applicable to this facility.

The provisions of 40 CFR Part 63 Subpart DDDD include no control requirements for lumber kilns.

### 4. Program Applicability (AIRS Program Codes)

Table 3: Program Applicability

<b>Program Code</b>	<b>Applicable (y/n)</b>
Program Code 6 - PSD	No
Program Code 8 – Part 61 NESHAP	No
Program Code 9 - NSPS	No
Program Code M – Part 63 NESHAP	Yes
Program Code V – Title V	Yes

## **Regulatory Analysis**

### **II. Facility Wide Requirements**

#### **A. Emission and Operating Caps:**

None applicable.

#### **B. Applicable Rules and Regulations**

None applicable.

#### **C. Compliance Status**

The Title V permit renewal application contains no indication of non-compliance.

#### **D. Permit Conditions**

None applicable.

### III. Regulated Equipment Requirements

#### A. Equipment List for the Process

Table 4: Equipment List

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
5000	Direct Fired Lumber Drying Kiln 1	40 CFR 63, Subpart A 40 CFR 63, Subpart DDDD 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	NA	None
6000	Direct Fired Lumber Drying Kiln 2	40 CFR 63, Subpart A 40 CFR 63, Subpart DDDD 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	NA	None
7000	Direct Fired Lumber Drying Kiln 3	40 CFR 63, Subpart A 40 CFR 63, Subpart DDDD 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	NA	None
8000	Direct Fired Continuous Lumber Drying Kiln 4	40 CFR 63, Subpart A 40 CFR 63, Subpart DDDD 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	NA	None
9000	Planer Mill	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	9400	Planer Mill Trim Block Chipper Cyclone (Stack ID: 9400)
			9600	Planer Mill Shavings Cyclone (Stack ID: 9600)
9301	Fuel Silo	391-3-1-.02(2)(n)	9100	Planer Shavings Truck Bin Cyclone (Stack ID: 9100)
			9200	Planer Shavings Truck Bin Baghouse (Stack ID: 9200)
			9300	Fuel Silo Cyclone (Stack ID: 9300)

#### B. Equipment & Rule Applicability

##### Emission and Operating Caps

The pre-modification facility, without any operating caps or emission limits, had the potential to emit more than 250 tpy VOC. In order to take the “one-time doubling” practice to avoid a PSD review for the addition of a new continuous lumber drying kiln (ID No. 8000), the facility proposed to cap VOC emissions for the existing facility (including Kilns 5000, 6000, and 7000) below 250 tpy and to cap VOC emissions from New Kiln 8000 below 250 tpy. These were achieved with the annual throughput limits specified in Conditions 3.2.1 and 3.2.2.

All of the existing kilns and the new continuous kiln will continue to fire wood shavings. The fuel specification is now included in Condition 3.2.3.

As discussed in this section, the facility conducted the toxic impact analysis under the circumstances that the power vents are always in operation when Kiln 8000 is in operation. Therefore, Condition 3.2.4 requires that the facility operate the power vents whenever Kiln 8000 is in operation. Any relaxation of such requirement would require that the facility re-conduct a facility-wide toxic impact assessment and demonstrate compliance with the GA Toxic Guidelines.

### **Applicable Rules and Regulations**

#### Georgia Rule 391-3-1-.02(2)(b), Visible Emissions

GA Rule (b) limits the visible emissions from all manufacturing processes not to exceed 40% opacity. It is expected that the opacity of all emissions from all drying kilns, the planer mill, and the fuel silo will be always well below 40% and will therefore comply with GA Rule (b).

#### Georgia Rule 391-3-1-.02(2)(e), Particulate Matter Emission from Manufacturing Processes

The allowable PM emission rate for all manufacturing processes is specified by the following equations:

$$E = 4.1P^{0.67} \quad \text{for process input weight up to and including 30 tons per hour.}$$

$$E = 55P^{0.11} - 40 \quad \text{for process input weight rate above 30 tons per hour.}$$

Where E equals the allowable PM emission rate in pounds per hour and P equals the process input weight in tons per hour.

Compliance with GA Rule (e) PM emission standards for Kilns 5000, 6000, 7000, and 8000 are expected as follows.

**Table 5: GA Rule (e) PM Emission Standards for Kilns 5000, 6000, 7000, and 8000**

Name/ID No.	Design Capacity (Mbf/hr)	Process Input Weight Rate (P) (tons/hr)	Allowable Emission Rate (E) (lbs PM / hr)
Kiln 5000, 6000, and 7000	6.00	12.00	$P = 4.1 * 12.0^{0.67} = 21.7$
Kiln 8000	12.55*	25.10	$P = 4.1 * 25.1^{0.67} = 35.5$

\* The design capacity of Kiln 8000 is based on the annual throughput cap.

$$1 \text{ ft}^3 = 12 \text{ bf}$$

$$\text{Assumed Wood Density} = 48 \text{ lbs/ft}^3$$

$$\text{PM Emission Rate for Lumber Drying Kiln} = 0.14 \text{ lb/Mbf}$$



Process Input Weight Rate for Kilns 5000, 6000, and 7000 (tph):

$$= 6,000 \frac{bf}{hr} * \frac{1 ft^3}{12 bf} * 48 \frac{lbs}{ft^3} * \frac{1 ton}{2,000 lbs}$$

$$= 12 \text{ tph}$$

PM Emission Rate for Kilns 5000, 6000, and 7000:

$$= 0.14 \frac{lb PM}{Mbf} * 6 \frac{Mbf}{hr}$$

$$= 0.84 \frac{lbs PM}{hr} < 21.7 \frac{lbs PM}{hr}$$

Process Input Weight Rate for Kiln 8000 (tph):

$$= 12,550 \frac{bf}{hr} * \frac{1 ft^3}{12 bf} * 48 \frac{lbs}{ft^3} * \frac{1 ton}{2,000 lbs}$$

$$= 25.1 \text{ tph}$$

PM Emission Rate for Kiln 8000:

$$= 0.14 \frac{lb PM}{Mbf} * 12.55 \frac{Mbf}{hr}$$

$$= 1.76 \frac{lbs PM}{hr} < 35.5 \frac{lbs PM}{hr}$$

PM emission rates for all four kilns are much lower than the limits specified by GA Rule (e). Therefore, all kilns are expected to comply with GA Rule (e).

Georgia Rule 391-3-1-.02(2)(g), Sulfur Dioxide

This standard limits the fuel burned in all lumber kilns to no more than 2.5 percent sulfur by weight. Because these fuel sources are waste wood-fired, they are expected to easily comply with GA Rule (g).

40 CFR 63 Subpart DDDD – National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products

As shown in Table 2 of the narrative, the facility is major for single HAP (methanol) and combined HAPs under Title V of 1990 CAAA. Per 40 CFR 63.2231, the facility is subject to 40 CFR 63 Subpart DDDD (PCWP MACT) because it is major for HAP emissions and is a plywood and composite wood products manufacturing facility that manufactures kiln-dried lumber.

Note that all the kilns (ID Nos. 5000, 6000, 7000, and 8000) are not subject to any compliance options specified in Tables 1A and 1B to Subpart DDDD, any operating requirements specified in Table 2 to Subpart DDDD, or any work practice requirements specified in Table 3 to Subpart DDDD. According to 40 CFR 63.2252, the facility is only subject to the initial notification requirements specified in 40 CFR 63.9(b), which has already been satisfied. Therefore, all the kilns are subject to this rule, but are not subject to any requirements.

### C. Permit Conditions

Condition 3.2.1 contains the combined annual throughput cap for the three existing batch lumber drying kilns (ID Nos. 5000, 6000, and 7000). As discussed previously, this is a PSD avoidance limit to keep the pre-modification VOC PTE below 250 tpy.

Condition No. 3.2.2 contains the annual throughput cap for the new continuous lumber drying kiln (ID No. 8000). As discussed previously, this is a PSD avoidance limit to keep the modification itself minor under PSD regulations.

Condition No. 3.2.3 specifies the fuel type for all four kilns (ID Nos. 5000, 6000, 7000, and 8000). This requirement subsumes the GA Rule (g) sulfur content limit.

Condition No. 3.2.4 requires that the facility operate the power vents on Kiln 8000 at all times while the kiln is in operation.

Condition No. 3.3.1 requires the Permittee to comply with all the provisions of 40 CFR 63 Subparts A - General Provisions, and Subpart DDDD - Plywood and Composite Wood Products.

Condition No. 3.4.1 limits the visible emissions from all manufacturing processes to 40 percent opacity based on Georgia Rule (b).

Condition No. 3.4.2 limits the PM emissions from all manufacturing processes based on Georgia Rule (e).

Condition No. 3.4.3 requires that fugitive dust generation be minimized from any source, including the Fuel Silo (Emission Unit ID No. 9301).

Condition No. 3.4.4 limits the fugitive dust emissions from the fuel silo, or any other fugitive dust source to less than 20 percent. These operational limitations are based on Georgia Rule (n)

Condition No. 3.5.1 requires that routine maintenance be done on all air pollution control equipment and that records be maintained for inspection.

Condition No. 3.5.2 requires the Permittee to operate all air pollution control devices, including baghouse, multiclones, and cyclones, which control particulate matter, when their associated process is operating.

Condition 3.5.3 requires that an inventory of filter bags be available to replace defective bags and hence minimize emissions. This is a condition found in most GA air quality permits for facilities that use a baghouse to control air emissions.

**IV. Testing Requirements (with Associated Record Keeping and Reporting)****A. General Testing Requirements**

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

**B. Specific Testing Requirements**

None applicable.

## V. Monitoring Requirements

### A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

### B. Specific Monitoring Requirements

Condition 5.2.1 requires that the facility monitor the pressure drop across the planer shavings truck bin baghouse (ID No. 9200). Data shall be recorded during each shift or portion of each shift.

Condition 5.2.2 requires the facility to check the exterior of the units for holes in the body and for evidence of malfunction in the interior of the cyclones (APCD Nos. 9100, 9300, 9400, and 9600) and retain a record, suitable for inspection of submittal, for each week or portion of each week of operation of the Planer Mill or Fuel Silo.

Condition 5.2.3 requires the facility to perform checks of the visible emissions from Planer Shavings Truck Bin Baghouse 9200 and to retain a record of daily visible emissions for inspection.

Condition 5.2.4 requires the facility to develop and implement a Preventative Maintenance Program for the planer shavings truck bin baghouse (APCD ID No. 9200) to assure that the provisions of Condition 8.17.1 are met.

### C. Compliance Assurance Monitoring (CAM)

An emission unit is subject to the provisions of 40 CFR 64, “Compliance Assurance Monitoring” because:

- It is located at a major source that is required to obtain a Title V Permit. [§64.2(a)]
- It is subject to an emission limitation or standard for the applicable pollutant (PM). [§64.2(a)(1)]
- The facility uses a control device to achieve compliance. [§64.2(a)(2)]
- Potential pre-controlled emissions of the applicable pollutant (particulate matter) from such emission unit are at least 100 percent of major source threshold. [§64.2(a)(3)]

Although the planer mill (ID No. 9000) and fuel silo (ID No. 9301) are equipped with cyclones (ID Nos. 9100, 9300, 9400, and 9600) and a baghouse (ID No. 9200), the Division believes that the control devices are installed to reclaim material rather than for achieving compliance with the GA Rule (b) visible emission standard and GA Rule (e) PM emission standards. Without the control devices, the planer mill and fuel silo could easily be categorized as fugitive emission sources, and their pre-control PM emissions are believed to be insignificant and minimal (much less than 100 percent of major source threshold) due to the nature of the large size of PM generated by these sources. Therefore, the Division determines that the planer mill and fuel silo are not subject to the CAM requirements.

## **VI. Record Keeping and Reporting Requirements**

### **A. General Record Keeping and Reporting Requirements**

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semi-annual basis.

### **B. Specific Record Keeping and Reporting Requirements**

Condition 6.1.7 contains the following definitions of excursions and exceedances, as well as additional reporting requirements:

- Subparagraph b.i. defines an exceedance as any twelve consecutive month period for which the total amount of lumber processed by the lumber drying kilns (ID Nos. 5000, 6000, and 7000), combined, exceeds 124.5 MMbf. This is a violation of the VOC PSD avoidance limit.
- Subparagraph b.ii. defines an exceedance as any twelve consecutive month period for which the total amount of lumber processed by the continuous lumber drying kiln (ID No. 8000) exceeds 110 MMbf. This is a violation of the VOC PSD avoidance limit.
- Subparagraph c.i. defines an excursion as any instance that the pressure drop recorded during daily check is greater than five inches of water.
- Subparagraph c.ii. defines an excursion as a failure to carry out an inspection required by Condition 5.2.2 or 5.2.4.
- Subparagraph c.iii. defines an excursion as any adverse condition of any cyclone (ID Nos. 9100, 9300, 9400, and 9600) discovered by a weekly inspection.
- Subparagraph c.iv. defines an excursion as any adverse condition of the Planer Shavings Truck Bin Baghouse (ID No. 9200) discovered during checks required by Condition 5.2.4.
- Subparagraph c.v. defines an excursion as the presence of any visible emissions from the baghouse (ID No. 9200).
- Subparagraph c.vi. defines an excursion as any instance where Kiln 8000's power vents are not operated when Kiln 8000 is in operation.

Condition 6.2.1 requires the Permittee to maintain a record of all actions taken to minimize fugitive dust from miscellaneous sources per Rule (n).

Conditions 6.2.2 and 6.2.3 require that the facility keep records of the monthly and 12-consecutive month total amount of dried lumber processed through the existing batch lumber drying kilns (ID Nos. 5000, 6000, and 7000), combined. The records will be used to demonstrate compliance with the PSD avoidance limit specified in Condition 3.2.1.

Condition 6.2.4 and 6.2.5 require that the facility keep records of the monthly and 12-consecutive month total amount of dried lumber processed through the new continuous lumber drying kiln (ID No. 8000). The records will be used to demonstrate compliance with the PSD avoidance limit specified in Condition 3.2.2.

Condition 6.2.6 was removed from the permit because the facility submitted notice to the Division on June 24<sup>th</sup>, 2019 of the initial startup of the new continuous lumber drying kiln (ID No. 8000). The facility reported the initial startup date as June 9<sup>th</sup>, 2019.

**VII. Specific Requirements****A. Operational Flexibility**

Not applicable.

**B. Alternative Requirements**

Not applicable.

**C. Insignificant Activities**

See Permit Application on GEOS website and Attachment B of the permit

**D. Temporary Sources**

Not applicable.

**E. Short-Term Activities**

Not applicable.

**F. Compliance Schedule/Progress Reports**

Not applicable.

**G. Emissions Trading**

Not applicable.

**H. Acid Rain Requirements**

Not applicable.

**I. Stratospheric Ozone Protection Requirements**

The standard permit condition pursuant to 40 CFR 82 Subpart F is included in this Title V Renewal Permit. According to Application No. TV-522192, the facility operates equipment that is subject to Title VI of the 1990 Clean Air Act Amendments.

**J. Pollution Prevention**

Not applicable.

**K. Specific Conditions**

Not applicable.

**VIII. General Provisions**

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.



**Addendum to Narrative**

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.